

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, DC 20594**

**HUMAN PERFORMANCE GROUP CHAIRMAN'S FACTUAL REPORT-
ADDENDUM**

**LOCATION & DATES
DCA01MM022**

A. ACCIDENT

Accident No.	DCA-01-MM-022
Vessels Involved:	USS Greenville, MV Ehime Maru
Location:	About 9 miles south of Oahu, Hawaii
Date:	February 9, 2001
Time:	1343 HST ¹

B. OPERATIONS/HUMAN PERFORMANCE GROUP

Tom Roth-Roffy, NTSB, Operations Group Chairman
Will Woody, NTSB, Human Performance Specialist
Barry Strauch, NTSB, Human Performance Specialist
Lt. Charlie Johnson, US Coast Guard
Lt. Commander Rick Santamauro, US Navy
Commander John Caccivio, US Navy
Capt. Tom Kyle, US Navy

C. Summary

On February 9, 2001, at 1343 local time, the USS Greenville, (SSN 772), a Los Angeles class submarine, collided with the Japanese Motor Vessel, Ehime Maru, about 9 miles south of Oahu, Hawaii. The Ehime Maru, engaged in teaching Japanese high school students the fishing trade, was traveling at 11 knots, on a course of 166°, en route to a fishing area. The Greenville was engaged in a distinguished visitor cruise, a Navy program that invites civilians to observe actual operations aboard its vessels. The Greenville struck the Ehime Maru as it completed an emergency surfacing maneuver from a depth of about 400 feet. The Ehime Maru was damaged and sank as a result of the collision. Thirty five people were onboard the Ehime Maru. The bodies of eight were found when the vessel was retrieved from the ocean floor. A ninth was missing and is presumed to have been killed in the accident. The Greenville was damaged but was able to return to Pearl Harbor under its own power. There were no injuries to any of the persons on board.

¹ All times are in Hawaiian Standard Time as read on a 24-hour clock, unless specifically noted.

D. Report

Commander Scott Waddle

On March 14, 2002, Safety Board investigators interviewed Mr. Scott D. Waddle. Mr. Waddle had served as the commanding officer of the USS Greenville at the time it collided with the Japanese fishing vessel, Ehime Maru, on February 9, 2001. He was a Commander with the U.S. Navy at the time, reporting to Capt. Rich Snead, the commodore of Southern Squadron One.

Mr. Waddle indicated that his relationship with the Commander of the U.S. Submarine Force in the Pacific (COMSUBPAC), Rear Admiral Albert H. Konetzni. Jr.², was both professional and personal. Admiral. Konetzni served as a mentor, teacher, as well as a superior to Mr. Waddle. Mr. Waddle admired him, among other reasons, because their personalities were similar. In addition, the admiral was a strong advocate of the sailor, and his themes of people, efficiency, and engagement were close to the themes of safety, efficiency, and backup that Mr. Waddle had advocated. Admiral Konetzni and Mr. Waddle first met in 1986 when the admiral was serving as a deputy commandant of midshipmen at the U. S. Naval Academy and Mr. Waddle was a lieutenant who had just passed his engineer's exam. "He was an inspirational officer," Mr. Waddle noted. "He was ...was gregarious. He was engaging. He was charismatic. He spoke his mind. He was -- he was brilliant, a very smart man, and I admired all those qualities" (Waddle interview transcript (W.), p. 5). "I admired him. He fired up my crew. He believed in me, I believed in him. I'd have done anything for him, and I did. I did do anything for him. Wouldn't do anything dishonest. Wouldn't compromise my character..." (W., p. 103).

Mr. Waddle did not remember Admiral Konetzni telling him, in Mr. Waddle's stateroom, that he believed the Commander was "going a little bit too fast," and was "getting ahead of" his crew, words from a superior officer that he would otherwise have been likely to remember. Mr. Waddle added that he disagreed with Admiral Konetzni's statement, in the Navy's Court of Inquiry (Col) that followed the accident, that he found Mr. Waddle to be informal with his men. Mr. Waddle stated that, "I've never been informal with my men. Not in...a professional manner where a flag officer was on board, for that matter of fact, when any guest or visitor was on board" (W., p. 7).

Mr. Waddle said that he supported requests from his superior officers consistently. He readily agreed to greet visitors on his vessel, the USS Greenville. "There wasn't anything that I wouldn't do to help promote our service" (W., p. 9). He also indicated that he believed that most other submarine commanders and their crews did not see tours the way he did, believing that it interrupted their day, forced them to stop what they were doing and prepare for it, although most were willing and most enjoyed showing off their vessels. He added

² Read Admiral Konetzni has since been promoted and was serving at the rank of Vice Admiral at the time Safety Board staff interviewed him, about 15 months after the accident.

that he saw himself as “kind of a cheerleader” and “never passed up an opportunity to take a group around [on a tour], even on a weekend.” He added, “I loved it, I...lived to tell my ship's story, and I made a lot of friends that way and valuable friends, dear friends, lifelong friends because of my sincere desire to be a good person, a good Samaritan, and...a good captain. (W., pp. 11 & 12).”

Mr. Waddle stated that there were no formal restrictions, instructions, or notices from his superiors regarding the conduct of distinguished visitor (DV) cruises, although this may have changed since the accident. He suggested one change that the Navy consider requiring submarines be broached before conducting an emergency blow. In addition, he stated that, “...I'll tell you that the naval warfare publications are a guideline. A guideline. If the Navy was so adamant about having a submarine spend a minute and 45 seconds or three to five minutes on a leg before going to periscope depth...or two five-minute legs here to clear baffles, then put it in writing. If you're going to jam that in my ear and tell me that as a captain I can't deviate from that, then make it a policy.” (W. p. 54).

He added that there were instructions regarding the protocol of the visitors on the tour, e.g., Congressional delegations, senior military officers, etc. There were no prohibitions against conducting evolutions such as emergency blows and high speed operations. “It's up to the prudent decision of the commanding officer at the time,” he said, “to determine what is appropriate.” (W., p.14).

The only reason the vessel went to sea that day was because of the presence of the DVs. Nevertheless, “...the reason I agreed to do it is because it was more operational time. It was another reactor start-up and shutdown for my nukes that needed the training. It helped support that initiative with the upcoming engineering inspection.” (W., p.51).

Mr. Waddle said that he had taken guests to test depth previously, and had seen emergency blow maneuvers performed before, presumably on DV cruises. He believed that, “...in my opinion, the Navy wanted one thing, and that was to get a fall guy, point to one individual that was responsible. I'll tell you again, it was me as the captain. Captain's responsible, the captain is accountable. Why? Because he bears all the responsibility. And if there's something that's not done right on his watch, then he is the guy that's accountable. He's the guy that's responsible.” (W., p. 18). He believed that, “after a year now, looking back on it all, that the Navy wanted to get this off the front page as fast as they could and put it behind them. And to do so, they needed to develop a case. They needed to show that, one, either I was haphazard, I was cavalier, I was showboating, I was more interested in the -- in the glamour and -- and the attention and showing off things rather than focusing on what's important” (W., p. 18). He added that civilians had been seated at the controls of submarines many times before, and that he was not concerned about performing the emergency blow maneuver because he knew that the sub was well-maintained and that nothing would break when performing it. In addition, although the watch bill could “have been

managed better" (W. p. 22), as individuals were not at their stations on the sub that the watch bill had dictated, the issue was irrelevant because fully qualified individuals were at the stations.

Mr. Waddle indicated that, while the officer of the deck, a "smart officer," performed well, "there were some other people there that could have backed him up and said, sir, we're not generating bearing rate[s on their contacts.]" (W., p. 24). In particular, he cited the fire controlman, the sonar supervisor, and the navigator as individuals who did not provide him with adequate back up that day. In addition, both the executive officer and he himself, could have seen the vessel, Ehime Maru. Further, he estimated that "35 to 40 percent of the fast-attack boats," were doing things with sonar watchstanders the way he did because "there were no guidelines in place for it" (W., p. 25). He also believed that taking the vessel down to test depth in the presence of civilians without security clearances was "a joke" since the first thing one does when submerging a submarine was to take the covers off the depth meters and speed indications, in the presence of these civilians.

He admitting to rushing the officer of the deck (OOD), because he was "fricking slow" and by giving him an "artificial time constraint," he was trying to get the OOD to be efficient in performing the tasks necessary to get the vessel to periscope depth. In hindsight, the OOD was "the wrong man to have on the watch bill at that time" (W., p. 29), something that he blames himself for not recognizing. By contrast, had he ensured that another officer was serving as the OOD, that officer "would have had the guts to look at me and say, Captain, you're pushing me, I need a couple more minutes, and I would have said okay. I'd have backed off" (W., p. 30). Mr. Waddle also said that on that day, the fire control officer, "despite his personal strength and as good as he was," did not perform well that day. He believed that, "I think, unfortunately, the behavior of the crew that day differed from the normal behavior of the crew," as well (W., p. 32). They, and he himself, were complacent.

Mr. Waddle indicated that his immediate superior in command did not observe his vessel under way, and had only been on the vessel twice, both times while it was docked. "He'd never been on board," he said, "that is going to sea on my submarine ... the accident was in February. He had been on board my submarine two times,...both of them were in the naval shipyard dry docking period when we were in SRA because I -- I had [told him]... Commodore, come down, my crew needs to see you, you haven't been down yet. Because he'd been trying to -- he was trying to resolve problems on board the USS Los Angeles, which had a severe manning shortage in leadership, and so all of his efforts were focused on that" (W. p. 33). He added that "because the Greenville was running smoothly, the crew had such a great reputation, we had performed admirably in the dry docking selection restricted availability, Naval Reactors wasn't on our butt, and they usually just have problems to deal with. The ship was clean. And so, the commodore, I'm sure in his opinion, could afford to not

look at us despite my request to come down, please, just look at us, let my men know you care. You know, come down and look at -- no, I gotta look at the L.A.” (W., p. 35)

Mr. Waddle said that if the AVSDU has been operating he would likely have seen the third contact that he had not seen. “To me,” he said, “there were no contacts that were close. It -- it validated everything that I thought to be true. Had I changed my thought process and said approaching that periscope depth evolution from the perspective of I know I have two contacts, I think they're to the north, I think they're far away, and I don't expect to see anything, had I approached it from the perspective of I need to prove to myself that there might be something close in that I can't hear, that maybe we haven't seen, that I've missed...” (W., p. 43). Further, “my XO, if he had had perhaps a better situational -- you know, better understanding of the situation awareness, could have helped preclude it. If my periscope search had been longer, if I'd taken the submarine shallower, it could have stopped, perhaps, the accident from occurring. There were a lot of what-ifs, but I'll never know. I'll never know what the key ones were.” (W., p. 44).

He deliberately did not follow standing orders of the vessel that day, regarding his orders to the OOD to quickly complete the steps necessary to bring the vessel to periscope depth. As he noted, “I chose to not follow specific things out of my standing orders because I deemed at that time them not to be necessary. The contact solution, as I knew it based on the fire control information, my sonar information, my ESM reports, my own what I considered to be adequate confirmation of a visual search, which I considered to be adequate because I was well above the wave tops, I could see clearly to the horizon. I -- I scanned through the Ehime Maru, and how I missed it, to this day, I still don't know. I thought everything was -- was adequate” (W., p. 46). He added that, “I put in writing my CO standing orders, and if they were my orders, then it's my prerogative to deviate from them when I deem it's appropriate to do so, and that's what I did. I'm the captain, I write the rules, I can change them.” (W., p. 55).

He said that the incident in which he was alleged to have ordered the Greenville to perform an emergency blow to stay within its designated area was accurate. He attributed the incident to the navigator's poor estimate of the forward progress of the vessel within the time constraints of the operation area boundaries. A representative of the squadron was on the vessel at the time and he informed him of the incident and the reason they performed the emergency blow. He attributed the incident in which the vessel was reported to have taken about 400 gallons of sea water down the hatch, while passing underneath the Golden Gate bridge, to an officer's taking “longer than normal” to close the hatch.

Mr. Waddle believed that he had sufficient operational experience to effectively command a submarine. “I wouldn't have been in command,” he added, “if I wasn't” (W., p. 69). Further, he agreed with comments that the squadron level

supervision was inadequate. "I will confirm that it's true that the squadron staffs are burdened with the requirement to provide oversight for the material readiness of...the vessels. And too often, they don't get the time or the focus on the important issues of tactics and operational readiness. And with the too few number of squadron deputies that exist where there's maybe one or two, it -- and there's, maybe, five or six submarines in the squadron, and one deputy is out riding a submarine for -- for training and proficiency and evaluation, that doesn't leave much back on the staff to help you. So I'd say the staffs are undermanned. That's a significant issue and concern. The staffs are so undermanned to the point where they can't do their jobs effectively. It isn't helping all those boats in their squadron. Others could debate that, but that's open for discussion. That's one man's opinion." (W., p. 80).

Mr. Waddle indicated that he had gone out on DV cruises on numerous occasions, and had done this with more civilians in the control room than there were at the time of the collision. The fire control technicians could have asked the civilians who were in his way to move out of the way. However, "But, if the point is to what degree did the -- did the civilians impact operations on that day, I'll say that there was some. Their -- their sheer presence alone was kind of like gnawing in the back of your brain. Gotta get the folks back, we've got to get the submarine back to port, we need to get -- they've got an agenda to maintain, so let's get back and get this over with. So, for me to say no, no, no, clearly the civilians had no impact whatsoever, yes, they have an impact. They had an impact by their sheer presence on the ship because it's not normal, it's different." (W., p. 90).

He said that while he wasn't in a rush to complete the DV cruise, he was trying to be efficient. "I wouldn't have gone to PD if I -- I knew I had to because it's the right thing to do. It's what you always do to make sure that there's not a sailboat just loitering around dead in the water or a small boat that's fishing floating with its engine off. I looked. I thought I looked adequately close in to make sure there was nothing there. And so, once that was done, go deep, let's turn, let's go back up and head out. The emergency blow was going to -- was going to cut off part of that surfacing evolution because it would have air in the ballast tanks immediately rather than coming up to periscope depth, raising the snorkel mast, lining up the ventilation system to put air in the forward and aft balance tanks, broaching the ship, starting the blower, and then driving in on the surface. It was boom, boom, boom, let's go. And I was trying to be efficient, and in that I compromised some of the safety issues. I don't know what they had scheduled that afternoon, but I knew that staying on board my ship late at night was not part of the plan. Wasn't part of my plan, either. I wanted to get back because I wanted to get my crew on liberty. I needed to get the ship moored so we could shut down the engineering plant, get the nukes on liberty as well." (W., p. 97).

He had been informed, but was not really aware that the AVSDU was out of service. As he noted, "...we were only out for such a short period of time that I

didn't consider it a prerequisite to repair before we dove the boat and moved on. And I was also criticized in the court of inquiry for not having any special written supplemental standing orders and having that kind of stuff in place to give extra guidance to the ODs. You know, that was a poor assumption on my part because if something that I know that that's important is broken, then I assumed that I had instilled within my men enough common sense and understanding of ship operations that they would have accounted for it appropriately." (W., p. 105). He did not write a standing order regarding the AVSDU because they had a skeleton crew and were only out for a brief period. If they had gone out for 24 hours, he would have written a standing order.

He described the weather that day as cloud covered but clear. He could see the coastline of Oahu, and remembers seeing a "white belt of haze around the mountain." (W., p. 110). The white background did make it difficult to recognize the Ehime Maru through the periscope. He believed that the navigator should have told him that the environment was changing. Had he made that report, Mr. Waddle might have looked a "little bit harder," when he completed his periscope search.

He discussed how he came to believe that the Greenville had identified only two target vessels when, in fact, three were operating in the area. "I didn't pick up on the fact," he said, "looking back at the nav plot or look at -- the CEP because it hadn't been updated for a while, that the -- that we had driven on north-south legs. I could tell you that walking into the sonar room and I asked McGiboney, what contacts do you have? Sir, I have these two. What do they sound like? Sound like trollers or small vessels, small craft. What are the bearings? Here they are. Northwest, northeast. Close or far? They're distant, sir. They're -- they're up by land. Okay. Walk over to fire control system with the GO display there, and I see two contacts up off the coast of Oahu. It made sense to me. Sonar just told me what they had, fire control has validated that information. I look over at the nav plot. We're here, nine miles away is land, seven miles away. Not an unrealistic solution for a contact going up the northeast to Diamondhead or one traveling northwest, maybe going wherever. So, it made sense to me and that's how I recall ships over the last ten years operating in Hawaii based on my personal experience. I didn't think about a narrow aspect, constant bearing, decreasing range kind of guy. And the CAST solution driving north and south, although the maneuvers were adequate for that solution, over time, over an hour or so, proved to be the more accurate one, unfortunately." (W., p. 127).

He believes that his error was in not stepping back more from the immediate environment during the periscope depth maneuver. He noted, that, "in hindsight, after looking at everything, despite what I thought was a geographic picture, despite what I thought was a contact picture as well, and reports from my sonar operator, ESM, and officer of the deck, there really was somebody close and I missed him. As the -- as the last source of backup, I missed it and I should have stepped back and taken a look at that whole forest instead of that one tree. I was

too close to the problem, and that's -- that's where I personally -- I hold myself accountable. I allowed myself to get too close to that evolution that I -- I didn't step back." (p. 135).

Captain Richard Snead

On March 15, 2002, Safety Board investigators interviewed Capt. Richard Snead, the Commodore of Squadron One, the squadron that included the USS Greenville. At the time of the accident, six submarines served in the squadron. In this capacity, he served as the immediate superior in command (ISIC) of Commander Waddle. Capt. Snead did not observe Commander Waddle operate the Greenville because of scheduling difficulties. "Just because the ship's schedule reasons," he said, "I never had the opportunity to embark them. They were underway very little during that time that I had command, so, really all you had to go on [in evaluating the Greenville's performance] was what your staff told you" (Snead interview transcript (S.) p. 4).

Capt. Snead also attributed his inability to observe the vessel's operations to the demands placed on him because of the need to work with the CO of another submarine in his squadron, that he indicated, "was one of the worst submarines I have ever seen in my life."

He indicated that, having served primarily with the Atlantic fleet, he was unfamiliar with Commander Waddle before he became his ISIC and had no opinion about him beforehand. A former classmate of his had served in the Pacific and believed that Commander Waddle had good technical skills as a submarine commanding officer, but that there were some behavior patterns that he found disagreeable.

The Greenville was being fitted with a Seal delivery system when he became the squadron commodore and as a result it was withheld from deployment rotation during the process. During the approximate three-month period in which the vessel was held in selective restrictive availability, Commander Waddle and his crew spent the time productively. Capt. Snead indicated that the Greenville was "the cleanest submarine I had ever seen in my [life], and I still say that, to this day." (S., p. 8) In addition, the ship executed sea trials well.

Capt. Snead described three incidents involving the Greenville that he could later see were indicative of Commander Waddle's performance as commanding officer. The first, which he had heard from several people after the collision with the Ehime Maru, occurred while the vessel was on an eastern Pacific (EASTPAC) operation. The executive officer of the vessel at that time described it to Capt. Snead, who nevertheless described the reports as "hearsay." The Greenville was anchored out, and VIPs were scheduled to tour it, but the sea was too rough to allow boat transfers. Commander Waddle was reported to have overridden the advice of others to allow the boat transfers. The public affairs

officer assigned to the tour refused to embark on the small boat and stayed on land.

The second incident occurred when the Greenville was about to depart its assigned operational area within an assigned time and had only a few minutes to surface. He indicated that Commander Waddle performed an emergency blow to quickly surface, to remain within the operational area. The deputy to the squadron commander (before Capt. Snead was assigned to the position) was on the vessel at the time and Commander Waddle explained the reasons for the maneuver to him at the time. Captain Snead said that others in the chain of command were informed of the incident, including the SUPBAC chief of staff. However, he did not learn of the incident until after the collision.

The third incident occurred when the Greenville was departing underneath the Golden Gate Bridge. According to Capt. Snead, Commander Waddle was late closing the hatches and a substantial amount of water entered the vessel. Commander Waddle's initial report indicated that about 100 gallons entered. Capt. Snead later learned that the vessel took in considerably more water than that, and that water got into the fire control consoles in the torpedo room. Later he learned, from hearsay, that the reason that the crew was late closing the hatches was because Commander Waddle "...was either up there [on the bridge], talking on his cell phone to a radio station here in Honolulu doing one of those radio spots, or that he was up there making arrangements to have a photograph taken from the Golden Gate Bridge of the ship as it passed." (S. p. 17).

A member of Capt. Snead's staff was on the Greenville during this incident and reported it to him. In addition, the Court of Inquiry that the Navy held following the collision addressed the incident and described it favorably. Capt. Snead could not explain why the official accounts of the incident were different from his own perceptions and did not include references to the alleged reason for the delay, i.e., Commander Waddle's deliberately delaying closing the hatch because of his desire to maintain cell phone conversations.

He did not learn the full details of these incidents until after the collision, and did not get a report from SUBPAC about them. He did not pursue the details that he did learn of the incidents at the time "...because at the time we were in the last stages of trying to deploy my problematic submarine, and...the Force Commander made it very clear to me [that it was the] top priority...So, we were very much focused in on, at the time U.S.S. Los Angeles in trying to get that ship out of here" (S., p. 19) He believed that he should have been informed of them, particularly the alleged incident involving the boat transfer in choppy waters. However, these types of alleged incidents do not generally get reported because "...guys will make mistakes and what you tend to do is when there is one of them, you talk to them about it and there is no written record." (S., p. 23)

Capt. Snead described the challenges facing overseeing the Los Angeles in some detail. Within a week after he took command of the squadron the leading engineering laboratory technician on the sub committed suicide. Other indications of problems included the numerous Captain's Mast that the commanding officer had convened, weak and recalcitrant chief petty officers, and insufficiently experienced crewmembers. The commander of SUBPAC eventually relieved the commanding officer of command and transferred one of Capt. Snead's deputies to replace the former commanding officer. As the captain stated, "And so, we set about trying to fix all of that and I am down one deputy, I am basically consumed that fall. And that is when the things about the staff started to become apparent, there were problems both in the talent and dedication and, and all of it goes back to a lot of what had been going on in the Navy and the Submarine Force and in the Pacific in particular, over the last two years, of, you know, we had taken a large squadron organization. We had, we had basically shuffled those guys around in the Navy Centralized Maintenance concept, and so what you have done is you have really weakened the squadron. We had never put in place a formal structure to tell, to say who was going to do what to who. There was a lot of uncertainty."

"In my view the squadron had become less than the best place to go. I am not sure we were getting the talent that we should have gotten. I can tell you now, looking back, we absolutely did not have the talent. And further more, we weren't training ourselves worth a heck, you know, it was terrible. And so, the contact between the squadron and the ships was inadequate. What contact there was, was unproductive, or at least not fully productive (S., p. 20-21). However, at present he believes that his staff is now fully manned and qualified.

Further, the SUBPAC commander was not happy that the Los Angeles was not ready to be deployed. As Capt. Snead stated, "So, we just did the best we could with them. And when I could not get them to be deployed by Christmas, you know, he kind of got adamant about the fact that that ship would be deployed before his change of command. And so, we worked very, very, very hard in January to get that ship, the reactor safeguard exam, because it had done poorly enough that we had to have a reexam. And so we had to get, we had to get the right supervisors in place. We had to repopulate the ship to a certain extent. I took from all my other ships to repopulate the L.A., including a guy from Greenville. And then right after the reactor safeguard, we had a successful reactor safeguard exam at the end of January, and then right into POM to deploy him in early March. And so that is what we were doing. We were working on trying to deploy L.A. And boom, this Greenville thing happens. There is a bolt from the blue." (S., p. 22). He had planned to observe the Greenville during their EASTPAC deployment, for either 10 or 20 days. "It probably would have been 10 days of sitting there in the control room," he say, "maybe that would have made a difference. I would like to think it would have made a difference." (S., p. 103).

In addition, SUBPAC policy had changed, and as a result, according to the captain, "...I think that there was a loss of perspective in that era where we quit doing inspections in Sub Pac and a lot of those things. And by the way, the Navy was doing the same thing. And the stand down of PMS inspections, we now know not good, getting back into all those businesses and it just takes it to run these complex machines. So, I think there was a real uncertainty on the part of the staff as to what they were really suppose to do. And so I don't think they kicked the can. I don't think they kicked the tires hard enough. I know they didn't. I know they didn't." (S., p. 28)

He summarized what went wrong with the squadron's oversight this way, "We had inadequate contact with other ships. The contact that we had was of insufficient quality to effect in a consistent measurable way outcomes on the ship. And the squadrons had lost their priority and were being used, basically, as a surge tank to fill other things. I had experienced guys taken from my staff to be chiefs of the boat and the job left gapped." (S., p. 38)

He believed that Commander Waddle enjoyed DV cruises because "it fit his personality perfectly." In addition, because he had been taken out of the deployment rotation, there was little else for him to do.

Capt. Snead believed that Commander Waddle and the Commander SUBPAC, had a "pretty close relationship" and he had the sense that Commander Waddle believed that he could go to the Admiral whenever "he wasn't happy." He described an incident in which Commander Waddle had met Bobby Kennedy Jr. in Honolulu and invited him to tour the Greenville. He also invited Admiral Konetzni to join them, but did not inform his ISIC, Capt. Snead.

Capt. Snead's staff believed that the Greenville was the best submarine in the squadron, and voted him the "Battle E" winner that year. However, he disapproved the award because the Greenville had not yet completed a long Pacific deployment.

A squadron commander oversees the submarines in his or her command by listening to staff, particularly the deputy commanders, and riding the vessels to observe operations. Before the Greenville collision they were not performing a sufficient number of inspections. In addition, the submarine force has also "...reassessed the caliber of ...[commanding officers] that it is assigning to waterfront activity. Because I think we realized that we weren't getting the kinds of guys that we really needed..." (S. p. 29).

Capt. Snead believes that submarine crews were not as experienced as they had been. "The impacts on the poor retention years, on depth of experience in the ships. All of those things [have affected crew quality]. The amount of time, it used to when you are on deployment, you were really doing tactical stuff all the time. Now, these guys go on deployment, they operate a lot, but is the intensity

of operations what it ought, I mean, so, it is just a different kettle of fish today in a lot of ways.” (S., p. 31)

Capt. Snead believed that Commander Waddle did not exercise the proper judgment of “risk versus gain” because of the quality of his experience before assuming command. “Waddle’s first two tours,” he said, “now I know this because I was told this, not because I looked in his record, Waddle’s first two tours were largely in shipyards. Waddle came in the submarine force at a time we were building five or six submarines a year. Somebody had to man those things.”

“But, it is also absolutely clear to me that the basic and mariner’s basic instincts are formed early on. I don’t think Waddle instincts were trained early on, didn’t have the opportunity. Then he goes to be XO. He didn’t drive a ship as XO. When you get your instincts about driving a ship, is when you actually have the con and you are putting the rudder over it. And the captain is standing there looking at you or talking to you, you know, what are you doing? I mean, you know, that is how you learn. You read the books, and then you stand there and you watch, you get to watch the CO, and if you are interested, it is like driving an automobile, if you really want to be good about it, you know, you have got develop all those senses so that you, particularly in a submarine where your picture is not through the window, you know, it is synchronized from sensors.” (S., p. 45).

Capt. Snead gave an example of what he believed to be Commander Waddle’s poor judgement in his going out to sea with a non-operating AVSDU. “Had I known that,” he said, “I would not have let him go to sea, because I can’t believe that a submarine skipper can get underway for something like a DV cruise, without that. That is the, there are few displays of truth in the control room. That is what I teach my COs, very few. Most of it is processed information. Process means possibly incorrect. Very few displays of raw truth and that is one of them.” (S., p. 47).

He also believed that Commander Waddle exhibited certain “aberrations.” For example, he described in Commander Waddle “the unique combination of personality, lack of experience, almost irrational self confidence, which was part, which was to a certain extent, encouraged by the environment in Pearl Harbor. It was kind of this where you are, you know, cigar smoking kind of, it was this, it was this kind of partial, ...others would say distorted, misunderstanding of what World War II submariners really did.” (S., p. 65)

Further, although the Greenville was manned with experienced crewmembers, Capt. Snead believed that, “I am not so sure anybody could have backed Waddle up that day, but it was pretty clear that everybody, his crew accepted that he was a one man band.” (S., p. 67). Capt. Snead also believed that had the changes in

oversight since the collision been implemented before the collisions, he would have become aware of deficiencies that he later saw in Commander Waddle.

Capt. Snead said that, on the day of the collision Commander Waddle violated rules regarding taking the vessel to test depth, and flank speed, and exposing that information to civilians who did not have proper security clearance. Otherwise, he did not violate rules, although he did violate "guidelines in the Navy publications." As he said, "There is no rule that says you shall not, because again, our rules are written to accommodate tactical situations of extremeness, where CO's judgment as to relevant risk has to prevail." (S., p. 50). Regarding rules governing the conduct of DV cruises he said that, "I don't think the rules were, in the sense that you are speaking, those rules clearly didn't exist. There were rules, but certainly not rules about how much you can throw these things around, all that kind of business. The Submarine Force along with the rest of the Navy is reevaluating all of that." (S., p. 57) Since the collision, however, some rules have changed and commanding officers are prohibited from performing emergency blows on DV cruises.

Several months after the collision, the Greenville grounded on approach to Saipan. Subsequent investigation showed that the ship was not carrying the required full complement of current navigation charts. Since the collision, SUBPAC has intensified the training cycle, changed the squadron staffing, to reflect what he referred to as "a return to the basics of submarining." He believed that the changes implemented since the collision had not been fully implemented at the time of the Greenville was recertified, before the grounding. He indicated that he intended to orally examine selected officers on both the Greenville and the Los Angeles to determine the level of their knowledge of submarine operations. He believed that had he done this before the collision he would have noted deficiencies that were later found among the Greenville crew.

He said that at one time many commanding officers avoided DV cruises, and that today, "many still do" because they are a "hassle."

Captain Tom Kyle

On March 18 2002, Safety Board investigators interviewed Capt. Thomas Kyle, the Deputy Chief of Staff, Tactics and Training, COM SUBPAC. Capt. Kyle reported to the Commander, SUBPAC, Admiral Konetzni.

Capt. Kyle listed Commander Waddle's errors that preceded the collision with the Ehime Maru on February 9, 2001. According to Capt. Kyle, Commander Waddle, "disregarded established submarine operating principles and practices. He disregarded those in favor of expediency and operated -- basically, operated the ship in an unsafe manner to go first to periscope depth to do a periscope search. He did an inadequate periscope search. He did an inadequate evaluation of the sonar conditions and the contacts present on the sonar display. And then, based

on faulty information, believed it was safe to conduct an emergency surfacing evolution when in fact it was not. And he ended up, obviously, having a collision and killing nine people.” (Kyle Interview Transcript (KL) p. 9).

Further, he added that “Commander Waddle's major error was a failure to critically assess his own crew's capability and performance against established standards in an objective manner and ensure that the -- the crew was operating at those standards. Instead, he tended to believe that he was better, believe that his crew was better than what it -- better than they were in fact...” (KL p. 9)

Capt. Kyle was unable to point to rules that Commander Waddle violated that may have led to the collision. The rule for the three-minute TMA legs, he indicated, was in the Commanding Officer's standing orders. The time for TMA legs and the time for a periscope search are both guidance and not rules. As he explained, “We have...some rules but not very many rules because most of the -- most of the way we operate the boat is ... subject to modification under tactical or special conditions where you have to do something extraordinary. You know, you're under a wartime condition or you're in a combat condition. Clearly, none of those were appropriate or applicable on this particular day, but the commanding officer's given latitude to -- to make decisions, violate standard policy or guidance in his -- if required by conditions of the sea or by tactical conditions in which the ship is found.” (KL p. 21). However, because they were not operating in tactical conditions on February 9, “there's no reason to violate or cut these corners on this particular day.” (KL p. 22).

Because the vessel was designed to face combat, the Navy gives commanding officers considerable freedom to determine the rules to follow. “It is a combat vessel,” he said. “And the guidance we put out, the procedures we put out are written with those -- that -- with that framework in mind. And we rely on the training and the judgement and experience of commanding officers to make sure that where are we fitting on that spectrum of what rules can be violated and not violated, what rules and procedures or guidance. There's a lot of dependence upon the judgement of the commanding officer, so we spend a lot of time discussing those things...” (KL p. 23)

Capt. Kyle believed that sufficient checks and balances were in place to ensure that the Commanding Officers in whom the Navy placed their trust were worthy of it. Prospective commanding officers are subject to an intense screening process.

Capt. Kyle believes that the crew deferred to Commander Waddle because he believed that they were clear of potential conflicts. As he stated, “...he went up to periscope depth with an assumption. He said -- he came to the wrong conclusion thinking that every -- the contacts were distant. There were some indicators on some of his displays and some of his watchstanders had misgivings about that fact, but because they had -- the watchstanders had sort of an inherent trust in their commanding officer, they didn't speak up when they should

have. And again, this is sort of also an outcome of the belief on the ship that they were really better than they really were. They hadn't earned this information, but, shoot, if the captain thinks it's okay to go up, who am I to stand in front of him and tell him it's not right, so they kind of just rolled on the captain's decision to go up." (KL, pl. 12). Essentially, to Capt. Kyle, Commander Waddle "stepped in the way" of watch officers to complete an independent analysis of the surface situation, without making an official announcement that he had the Con.

Further, Commander Waddle should have broached the ship, that is, raised it to a high level to obtain an adequate view of the surface through the periscope, because, as he stated, "Normally, stealth and ... [discretions are] not ... important factor[s] when conducting one of these events." (KL p. 13). He did not compensate for the loss of the AVSDU.

Capt. Kyle believed that Commander Waddle was fully conversant with the rules and guidance necessary to safely operate the submarine. However, at the time he was assigned to command the Greenville, several events took place. The vessel was in a longer than normal interdeployment training length. The oversight was deficient because it was predicated on a 15-month deployment process "so that certain milestones along that 15 months ... [take place]." (KL p. 29) However, the Greenville's deployment cycle was "significantly longer than 15 months" and as a result the "standard inspection points were spread out longer, so there were farther fewer between observations by higher authority..." (KL p. 29)

In addition, there was "change in the oversight practices" of that particular squadron. Whereas a tactical exam on a vessel would be performed every 12 months regardless, squadron leadership decided that "was probably not necessary to run them at that interval strictly speaking but to key it primarily to the interdeployment training cycle..." (KL p. 30). Therefore, the exam cycle was lengthened and Commander Waddle "did not have this formal ...look." (KL p. 30).

According to Capt. Kyle, "the second thing that happened at that time was the squadron command's reduced in size in -- in an effort to gain efficiency on -- in management and oversight of the various submarine squadrons. And there was a major perturbation -- suffice it to say, a major perturbation in the oversight infrastructure. A new command was set up and they had certain responsibilities. The old squadron command had some residual responsibilities. The billets were coming and going. We were filling out -- filling out these new arrangement -- new oversight manning levels, so there was a period of time when there was -- I won't -- it was a little bit disrupted and confused as to who was doing what and had enough people to do it so that oversight infrastructure was, I can only say, in transition for a good period of time there and probably not as well focused as a result as it had been previous or since." KL p. 30).

"The third thing that happened was that particular squadron, while its size was reduced at the same time, was struggling with another boat that had a -- a series of problems, ... that ship was in fact on a short duration, short fuse to deployment. She was on a deployment cycle and trying to get ready to go at this date and was having -- having problems which commanded a great deal of attention from its direct ...overseeing squadron, which further caused there to be less attention placed on the Greenville which was not in a deployment, you know, chute if you will, getting ready to go out on deployment." (KL p. 31)

"So -- and then, when the squadron did go down to the boat or any other senior people went down to the boat, there was this sense of -- of we're really good. And a lot of the -- a lot of the cursory and -- and superficial I guess indicators of readiness were all -- looked good. You know, the boat was clean, the crew was positive, it had good retention. There was good indicators out there, you know, that the -- this is a healthy command climate, the crew is happy with their leadership. You know, it seems to be running well. The boat's nice and clean. It's spiffed up, looks good. The ship -- crew members were real proud of their organization." (KL p. 31)

Capt. Kyle believed that if they had "taken the time" to perform a thorough examination of the Greenville and its crew, "...looked under the rugs, ... kicked over a few stones and looked really hard..." (KL p. 32) they "...would have seen the harbingers of problems."

However, there were indicators or problems, such as the incident involving taking water down the hatch while passing under the Golden Gate Bridge, but no one "connected all the dots together" and thoroughly examined the ship and its crew. In addition, he considered the emergency blow to remain within the operational area "so far out, so far close to a rule that was violated for no good reason, that would have been almost citation time." (KL p. 44) However, he did not learn of that incident because, "that incident did not become common knowledge to the submarine force hierarchy. It didn't go higher than the squadron, to my -- the best of my knowledge." (KL p. 45)

Since then they have changed several aspects of oversight. The commodores evaluate all submarines on a regular basis, regardless of deployment cycle. The evaluation is a multi-step process in which the first is to perform a "basic submarine assessment" after the ship returns from deployment. They evaluate submarine crewmembers to assess their fundamental understanding of their jobs and responsibilities. From this evaluation corrective actions are recommended and those are tracked and monitored then, the crew is reinspected as required.

Six to nine months later a second formal review, at a higher level, is conducted, though staff of the SUBPAC tactics and training command. The squadron commodore is then given the responsibility to assure that identified problems are

tracked and corrected. These evaluations are performed independently of engineering inspections.

In addition, they have begun a "boat tracking function" to enable them to examine events that occur of time. The submarine force had an incident reporting system in place that reported nuclear propulsion incidents to Adm. Bholen. They have also "reinstated and reinvigorated" the non-nuclear incident reporting system. He did not believe that an incident could occur that would not be reported through the system and as a result, the chain of command.

After the Greenville's collision Commander Waddle was relieved of command. A new commanding officer was assigned to the ship and it was then recertified. However, on August 27, 2001, the Greenville grounded off the Coast of Saipan. The new commanding officer, and the executive officer and navigator, who were assigned to the Greenville at the time of the February collision, were given punitive letters of reprimand. Capt. Kyle believed that the recertification was not sufficiently thorough, partly because they "...allowed ourselves to kind of get into a mode where we felt like, well, that guy, [the commanding officer], he just didn't have the right standards, the right makeup. So, we changed that guy out and then we'll go check out these higher-level processes and make sure everything's okay." (KL p. 64). Further, they "...didn't fully appreciate how embedded the culture of believing you're better than you are had pervaded -- was pervasive throughout that submarine. People -- there was a reticence to challenge a commanding officer, decisions that didn't feel comfortable doing that, didn't feel like that was their place in life. A lot of the practices that are fundamental to operate a ship at sea were -- had been neglected and had not been carefully looked at. And didn't -- didn't recognize that very well at the time." (KL, pp. 64-65). Had they performed "a more thorough baseline assessment" it is likely that they would have "caught the problems" that led to the grounding

Following the collision, they looked closely at the problems that may have affected the Greenville's crew performance and they are making some changes in operations and oversight. While the process of selecting candidates for commanding officer positions is an extremely fair process, they will be looking more carefully at the quality of the candidates experience, by creating a log similar to an airman's log that lists takeoffs, landings, etc. to enable them to track an individual's progress in a more focused way than before. This log will be a factor, not so much in selection but in assignment. In addition, they have "revised our submarine training policy and instruction guidance on how to do submarine training to emphasize performance base, and it has specific levels of competency required so that as we are going through the training process..." (KL, p. 73).

As noted, they have changed the relation of training and evaluation to the interdeployment cycle. They have also changed the policies regarding assigning deputies to the squadron commanders to assure that the deputies are "...the very, very best commanding officers we have." (KL, p. 76). They have also

lengthened the period to two years in which the two key evaluators serve in that position. The size of the squadron staff has also been increased to assure that vessels get a more thorough evaluation than the Greenville received. They will also make changes in the training of prospective commanding officers and the examination passing requirements will be made more stringent. Training will include a ship-handling module that had not been included before, and prospective commanding officers will be given more practice in ship handling maneuvers.

They are changing their periscope operating procedures as well and will institute a qualification program to assure that periscope operation is fully understood in the range of sea states. Senior officers who ride submarines will be given a standard evaluation format to assure that little is overlooked in the evaluation. Further, assignment to observe ships will be more systematic to ensure that the ships perceived to be performing well, and those perceived to be performing poorly, receive proper evaluations.

All prospective executive officers will attend the same class as prospective commanding officers as well, in the hope that this will make the executive officer more willing to “challenge the captain on issues of technical or tactical matters.” (KL p. 82). In addition, they are attempting to develop better sonar systems “that would provide bearing and range to passive contacts that are fairly close.” (KL p. 83). These changes are being implemented in Pearl Harbor, and the information will be shared with the Atlantic submarine fleet as well. These changes have been shared with “the very highest levels of submarine command” and their approval for these changes was granted.

Vice Admiral Albert H. Konetzni, Jr.

On April 30, 2002, Safety Board investigators interviewed Vice Admiral Albert H. Konetzni, Jr, the Deputy and Chief of Staff of the U. S. Atlantic Fleet. Admiral Konetzni served as the Commander, SUBPAC, at the time of the Greenville collision with the Ehime Maru. Admiral Konetzni believed that the guidelines submarine commanding officers followed to ensure that the surface were clear and concise. Further, he believed that it was not practical to put the guidelines into rules. As he said, “I’ve been a submariner now for thirty-six years and, clearly, when you look at guidelines, the book would be -- if you wanted to have it completely set in stone, it would be bigger than you have the capability of reading in ten years. You can’t do that.” (Konetzni interview transcript (K.), p. 3).

He believed that commanding officers have to avoid becoming “...the problem to such a degree that you have become kind of a pied piper leading the other people.” (K. p. 4). He elaborated on this by saying that, Commander Waddle “showed very, very well,” that the reports of inspections of the Greenville and of officers who had ridden the vessel were positive. As he said, “The ship looked good, and I thought he was good.” The Admiral added that he personally had

ridden the vessel with Commander Waddle in command, riding from the Greenville to a Japanese submarine that was on the ocean floor, and that he observed operations in the control room for hours as they prepared for the evolution. "Everything," he said, "was done perfectly." (K, p. 4).

He believed that on the day of the collision Commander Waddle "played to his audience." As he explained, "I believe, on this day in question, because of the Commanding Officer's professionalism, his ability to lead because people like him I believe...unconsciously he just sped up the [process]-- you don't do business that way. You use that control room as the temple of your existence. It's quiet. The repeat backs. You use the ability of every person. I think that he sped it up." (K. p. 5).

Admiral Konetzni related an episode that occurred to him when he was a submarine commanding officer. His vessel was preparing to go underneath the hull of an American submarine that was surfaced. He and his crew thought that the submarine was at one location but then, for some reason, he sensed that it was not where he thought it was. At the last minute he ordered an emergency descent to avoid colliding. Afterwards, he discussed the episode with his subordinate officers. "This is all about forceful back-up. Why didn't somebody tell me?" he asked his subordinates. "I mean, clearly, you could see the bearing rate on what we call the AVSDU. You can see it on the fire control system. It was falling apart. 'Why didn't you tell me?' After I calmed down, I had a very good exec and he was very forceful back up for me, and I really learned. He said, and I know I told Scott this because I've told the story to just about everybody I've ever met, who's a professional mariner, that, my Exec told me, 'You sounded so confident. You had it all that we just followed you like the pied piper.' And I made it clear to them all that if I screw up, please tell me. I also made it clear to myself. I don't think Scott had experienced this problem. If you don't experience it, it may not sink in there, but I always told myself, 'Slow it down.' 'Slow it down.'" (K. p. 7).

The Admiral believed that on the day of the collision the commanding officer acted as a "pied piper," leading his crew to perform an inadequate search at periscope depth. Further, his subordinates did not provide him with "forceful backup." "I must tell you," he added, "I am shocked that the executive officer didn't say, 'I need more time.'" I'm shocked at that. I believe, the navigator was standing in the control room, right in the perfect position that he didn't say, 'Skipper, we need more time.' I've had to do that. I do it with my boss right now." (K. p. 22).

The Admiral admitted that Commander Waddle's immediate supervisor in charge, Capt. Snead was busy with the Los Angeles and that the ship had problems. However, he added that, "It's not difficult for a squadron commander to go down, personally, and see what the basic submarine aspect is. So I understand. I understand where he's coming from, but the immediate superior-

in-command is a critical guy and I just throw that out to you. And I understand. It's a balance of time. I wish that he had been down there more often. On the other hand, I don't fault the Navy and I certainly don't fault my own chain of command out there because, I think, we had a lot of good people. " (K. p. 9)

He believed that the ISIC's visit to the Greenville would have been "another set of eyes" although he did not believe that it would have made a difference in the outcome of February 9, 2001. He also did not agree with Captain Snead that Commander Waddle lacked the necessary qualifications to be an effective commanding officer. He said, "He's had plenty of experience. I rode his ship when he was XO of San Francisco. He did a beautiful job. He did very well. I can't remember where he stood in the PCO -- I think you guys have it...I saw him on San Francisco. His skipper on that ship later became a PCO instructor. He did fine. He did fine. He did fine in all his inspections. I think he just did fine. I think that day that the individual -- that's the lesson I've learned. I think he was playing to the audience." (K. p. 11).

Although there are no rules or guidance available to ISICs on the frequency or regularity of ship visits, he believed that they should be able to balance their activities to enable them to visit the vessels they oversee. The Admiral raised the possibility that the situation on the Greenville had changed since his visit to the vessel, but the ISIC's visit should have enabled him to recognize whether this had occurred, and whether "forceful backup" was still present on the vessel. There are, further, no specific guidance that directs Commodores to visit the vessels in their squadrons. He was unaware, until after the collision, that Capt. Snead had not visited the Greenville.

Admiral Konetzni was unaware of the allegations regarding the three incidents involving the Commander Waddle and the Greenville before the collision, and he put little stock in them.

Admiral Konetzni did not disagree with Commander Waddle's decision to take the vessel on the DV cruise with the inoperative AVSDU, but absent the AVSDU, procedures to compensate for its absence needed to be implemented. As he said, "I certainly stand by my comment. This is a repeater in the control room. The same repeater that's in the sonar room. I would tell you that I don't think that there is a skipper on the waterfront here now, maybe other than Commodore Snead, that would not have gotten underway with AVSDU. On the other hand, you certainly want to have procedures installed. I mean, handwritten would be fine or at least announced to all your -- however you want to do it then." (K. p. 28).

He discussed the time on a New Year's Day that Commander Waddle called him at home to tell him that he had met Bobby Kennedy Jr. and invited him to tour the Greenville, and asked him if he wanted to join them. He believed that, in hindsight, this episode may have showed Commander Waddle to be "an outlier

to some degree.” “I never put two and two together,” he said, “because I think that this was a fellow who was extremely gregarious, but I think gregarious folks, and I am too, have to be very, very cautious when it's something that is not just shooting the breeze with you here, you know? When you're doing it, you're doing it. And those guys, all my career and even with Scott, they have been hammered about procedures and making sure you take the time.” (K. p. 33).

Admiral Konetzni summarized the lessons learned from this collision, which, because they had been learned before, explained why he believed that there were no new lessons to be learned from this accident. As he said, “I think that ...submarining, I think I said this, is a team sport, and everybody has to be involved. The best ships are those that the young guy on the helm is just in his mind as important as the skipper. Number two: That you have procedures that have been written in blood time and time again, and those procedures say that I will go ahead and understand my tactical picture before I go to periscope depth. And you have the use of the periscope that makes it perfectly clear that you, this is a non-tactical situation, that you will go ahead and sweep around and you'll do your low power and high power sweeps. It's so clear. And that, quite frankly, as a mariner, I'm not worried about getting picked up by somebody's radar, so I'll even broach the sail, or, if not that, at least I'll put eleven foot of pole up. Generally, it's a time issue. He drove the time issue so that nothing could integrate and that's what concerned me. So, I think, there's no new lessons in this one. I mean, it's a tragedy because, clearly, I think I stated, in this one here, certainly, the moon and the stars and a few other things were aligned, and you couldn't replicate this if you tried, as tragic as it was. It should never have occurred. I'm saddened by it.” (P. 36).

If he had to do it over again, knowing now that Capt. Snead had not visited the Greenville, he would have ordered him to do that. He also wished that he had not agreed to his public affairs officer's request to provide a vessel for the group of DVs that Admiral Macke had provided in the original request for the DV cruise that occurred on February 9, but he was in a rush to fly to Japan and Korea at the time and did not make his concerns explicit. He also would have made clear to the chief of staff that he should have remained in the office while the Admiral was out of the country. Further, he believed that the chief of staff, because he was in the control room at the time, “should have been more sensitive to what was going on.” (K. p. 50).

The Admiral acknowledged the impossibility of providing oversight to all Navy vessels and vehicles at all times. But, “if I train and I select, train and I select and I stay on the same focus, on my core values, I select, then I got a good chance of having a fairly qualified individual for that job.” (K. p. 61).

The submarines are equipped, he believed, with excellent equipment such as the CEP, the contact evaluation plot, the sonar system, and the type 18 periscope. These systems have great capabilities if used properly. Nevertheless, he would

like to see better sensors on the systems, such as laser rangefinders on the periscopes.

He believed that the Navy, like other “big organizations,” does not like to “address realities,” because that can be painful. He cited the Navy findings on the Iowa explosion and the Tail Hook scandal as examples. He believed strongly in personal accountability.

He admitted that it may be difficult for junior officers to speak up if they are dissatisfied with the state of events. “that is why,” he said, “That’s why I always look very, very hard at the atmosphere on the ship. A good, wholesome atmosphere is one where everybody’s voice would be heard.” (K. p. 74).

He summarized again the events or factors that led to the collision. He said, “One was I don’t deny it. You can always train better and I believe that there is no better training system in the world that I know of than the submarine crews. I really believe that. Number two: I believe that equipment did not play a role in this. We can talk back and forth on this AVSDU, but I just don’t think it played a role because there were work arounds. We may have done it. So, I think, training, equipment. Number three: The business of guests on board. I’ve done it literally hundreds of time. It’s always done very professionally. I think it’s critical for our Navy to do those kinds of things and it’s clear to me that when you have a guest on board, as the commanding officer, senior leaders, but everybody, that your ears and eyes have to be ...[alert]. So, I think, having civilians on board, as long as you do not allow yourself to be distracted, is fine. You can do it. The fourth thing that I would throw out to you is that the forceful back up is so critical on everything. I’ve used the term many times, but the forceful back up, the skipper, you’re going too fast, even to say, skipper, I don’t understand where we are right now. And the final thing is the time element because that forceful back-up is missing, but the final one, the fifth is the skipper, who I think was adequately trained and had the right background and his performance shows he somehow placed himself into an atmosphere in the control room that he didn’t previously understand.” (K. p. 80-81)

Rules

At the Safety Board’s request, the Navy provided it with rules and guidance pertinent to the events of February 9, 2001. None concerned specific the performance or prohibition against the performance of specific evolutions when DV’s are on board.

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